Furthermore, the specification contains support for an additional electrode being formed either on the same or different surfaces as the hot electrode. More particularly, Figs. 56(a) and 56(b), for example, illustrate that a hot electrode 301 is formed on the top surface and that additional electrodes 302 (stray) and 305 (back) are formed on the top surface and bottom surface, respectively. Moreover, Figs. 50-55, for example, support the subject matter recited in claim 44. Thus, Applicants submit that the specification contains sufficient support for the subject matter recited in claim 44. Accordingly, Applicants request that the Examiner withdraw the objection to the disclosure.

II. Response to Claim Objections

The Examiner alleged that claim 39 contained informalities and that the term "two" at line 2 of the claim should be deleted. (OA at ¶ 5). Applicants have deleted the term "two" at line 2 of claim 39. However, Applicants do not concede that this term is improper. Examples of two electrode elements formed between adjacent hot electrodes are illustrated in Fig. 54. Thus, Applicants request that the Examiner withdraw the objection to claim 39.

The Examiner also alleged that claim 44 contained informalities and that the term "holt" at line 7 should be changed to --hot--. (OA at ¶ 6). Applicants amend claim 44 as suggested by the Examiner. Thus, Applicants request that the Examiner withdraw the objection to claim 44.

III. Response to Rejection under 35 U.S.C. § 112, second paragraph

The Examiner alleged that claims 36-41 were indefinite for failing to particularly point out and distinctly claim the subject matter Applicants regard as the invention. More particularly, the Examiner alleged that the term "including" at line 2 of claim 36 is

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indefinite. The Examiner alleged that it is unclear whether the ozonizing unit or the electrode plate include the element following the term "including." The Examiner requested clarification. (OA at ¶ 8).

In response, Applicants direct the Examiner to pages 61 and 62 of the specification which describe that the ozonizing unit has an electrode plate and the electrode plate has the various elements, i.e., dielectric substrate, hot electrode, back electrode. Thus, Applicants request that the Examiner withdraw the rejection of claim 36 under section 112, second paragraph. Claims 37-41 depend from claim 36 and, thus, the rejection of these claims under section 112, second paragraph, should also be withdrawn.

The Examiner also alleged that claim 44 fails to set forth the subject matter that Applicants regard as the invention. Specifically, the Examiner alleged that claim 44 fails to correspond in scope with that which Applicants regard as the invention. To support this allegation, the Examiner refers to Fig. 59. (OA at ¶ 9).

First, Applicants point out that Fig. 59 does illustrate the subject matter recited in claim 44. The ozonizing unit illustrated in Fig. 59 includes a hot electrode with spiral elements. On the other hand, claim 44 recites "a hot electrode having linear electrode elements."

Furthermore, the specification contains support for an additional electrode being formed either on the same or different surfaces as the hot electrode. More particularly, Figs. 56(a) and 56(b), for example, illustrate that a hot electrode 301 is formed on the top surface and that additional electrodes 302 (stray) and 305 (back) are formed on the top surface and bottom surface, respectively. Moreover, Figs. 50-55, for example,

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support the subject matter recited in claim 44. Thus, Applicants submit that claim 44 corresponds to the scope of Applicants' invention. Accordingly, Applicants request that the Examiner withdraw the rejection of claim 44 under section 112, second paragraph.

In making the various references to the specification and drawings set forth above and hereinafter, it is to be understood that Applicants are in no way intending to limit the scope of the claims to the exemplary embodiments described in the specification. Rather, Applicants expressly affirm that they are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

IV. Response to Rejections under 35 U.S.C. § 102(b)

The Examiner alleged that claims 36, 38-40, and 44 are anticipated by Miyagawa. (OA at ¶ 12) In response, Applicants submit that Miyagawa fails to teach or suggest all the elements of claims 36, 38-40, and 44.

In order to properly anticipate Applicants' claimed invention under 35 U.S.C. § 102(b), each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *See* M.P.E.P. § 2131 (8th Ed., Aug. 2001), (quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989)). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. § 2131 at p. 2100-69.

Claim 36 is directed a ozonizing unit comprising a combination of elements including, *inter alia*, "an electrode plate including ... a back electrode formed on the other surface of [a] dielectric substrate so that a voltage is applied across [a] hot

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electrode and the back electrode to produce surface discharge on one surface of the dielectric substrate."

Miyagawa is directed to a solid state corona discharger. Miyagawa discloses that the discharger includes first electrode 2, second electrode 3, and a third electrode 5, all of which are formed on a dielectric 1. Miyagawa, Fig. 5 The discharger also includes a fourth electrode 4 which is to be charged. In contrast to claim 36, Miyagawa discloses that the corona discharge is created in air gaps 10-1 and 10-2 between the third electrode 5 and the fourth electrode 4. Miyagawa, col. 5, lines 15-27. Thus, Miyagawa does not disclose at least that "a voltage is applied across [a] hot electrode and the back electrode to produce surface discharge on one surface of the dielectric substrate," as recited in claim 36 (emphasis added).

Therefore, Miyagawa fails to teach all the elements recited in claim 36 and, hence, does not anticipate this claim. For at least this reason, claim 36 is allowable. Claims 38-40 are allowable for at least this reason.

Furthermore, claim 44 is directed a ozonizing unit comprising a combination of elements including, *inter alia*, "an electrode plate including ... an additional electrode formed on one surface of the dielectric substrate so that a voltage is applied across the hot electrode and the additional electrode to produce surface discharge on one surface of the dielectric substrate" (emphasis added). As mentioned above, Miyagawa discloses that the corona discharge is created in air gaps 10-1 and 10-2 between the third electrode 5 and the fourth electrode 4. Therefore, Miyagawa fails to teach all the elements recited in claim 44 and, hence, does not anticipate this claim. For at least this reason, claim 44 is allowable.

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V. Response to Rejections under 35 U.S.C. § 103(a)

The Examiner alleged that claims 37 and 41-43 are unpatentable over Miyagawa. (OA at ¶ 14). In response, Applicants submit that a *prima facie* case of obviousness has not been established for claims 37 and 41-43.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim elements. Furthermore, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03 (8th Ed., Aug. 2001), (quoting *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970)). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Third, there must be a reasonable expectation of success. *See* M.P.E.P. § 2143 at pp. 2100-122 to 127. In this case, Miyagawa fails to teach or suggest all the elements of the claim.

Claims 37 and 41 depend from claim 36 and, thus, incorporate all the elements of that claim. As mentioned above in the Response to Rejections under 35 U.S.C. § 102(b), Miyagawa fails to teach or suggest at least that "a voltage is applied across [a] hot electrode and the back electrode to produce surface discharge on one surface of the dielectric substrate," as recited in claim 36 and incorporated in claims 37 and 41 (emphasis added). Therefore, a *prima facie* case of obviousness has not been established because Miyagawa fails to teach or suggest all the elements of claims 37 and 41. For at least this reason, claims 37 and 41 are allowable.

Furthermore, claim 42 is directed to an ozonizing unit comprising a combination of elements including, *inter alia*, "an electrode plate including ... a back electrode having

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linear electrode elements formed on the other surface of [a] dielectric substrate along a direction intersecting the electrode elements of [a] hot electrode so that a voltage is applied across the hot electrode and the back electrode to produce surface discharge on one surface of the dielectric substrate" (emphasis added). As mentioned above, Miyagawa discloses that the corona discharge is created in air gaps 10-1 and 10-2 between the third electrode 5 and the fourth electrode 4. Therefore, Miyagawa fails to teach or suggest all the elements recited in claim 42. Accordingly, a *prima facie* case of obviousness has not been established for claim 42. For at least this reason, claim 42 is allowable.

Claim 43 is allowable at least due to its dependence from allowable claim 42. "If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious." M.P.E.P. § 2143.03, p. 2100-126, (citing *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988)).

VI. Conclusion

In view of the foregoing, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Attached hereto is a marked-up version of the changes made to the specification and claims by this Amendment. The attachment is captioned "**Appendix to Amendment of June 13, 2003**".

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Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW
GARRETT & DUNNER, L.L.P.

Dated: June 13, 2003

By: _____
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Appendix to Amendment of June 13, 2003

IN THE CLAIMS:

Please amend claims 36, 39, 42, and 44, as follows:

36. (Amended) An ozonizing unit comprising an electrode plate including:

a dielectric substrate;

a hot electrode and a stray electrode, each having linear electrode elements formed on one surface of the dielectric substrate; and

a back electrode formed on the other surface of the dielectric substrate so that a voltage is applied across the hot electrode and the back electrode to produce surface discharge on one surface of the dielectric substrate.

39. (Amended) The ozonizing unit according to claim 36, wherein [two] linear electrode elements of the stray electrode are interposed between the adjacent linear electrode elements of the hot electrode.

42. (Amended) An ozonizing unit comprising an electrode plate including:

a dielectric substrate;

a hot electrode having linear electrode elements formed on one surface of the dielectric substrate; and

a back electrode having linear electrode elements formed on the other surface of the dielectric substrate along a direction intersecting the electrode elements of the hot

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electrode so that a voltage is applied across the hot electrode and the back electrode to produce surface discharge on one surface of the dielectric substrate.

44. (Amended) An ozonizing unit comprising an electrode plate including:

a dielectric substrate;

a hot electrode having linear electrode elements formed on one surface of the dielectric substrate; and

an additional electrode formed on one surface of the dielectric substrate so that a voltage is applied across the [holt] hot electrode and the additional electrode to produce surface discharge on one surface of the dielectric substrate.

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